

M ACKNOWLEDGEMENTS AND LIST OF PARTICIPANTS

IWCs have been completed in Serbia with varying intensity since 1982 under the auspices of Wetlands International. Research was previously mainly focused on the Danube (the most important and largest winter gathering place for aquatic birds in Serbia). The list of sites monitored has been expanded since 2012 to include all categories of aquatic habitats, including wet meadows and landfills where waterbirds gather during the winter. This change has led to a large increase in sites and the fragmentation of parent sites into subsites, which has helped us to gather detailed data, and obtain good estimations of site coverage and the conditions of water ecosystems.



ORGANISATIONS: While the censuses were carried out mainly by volunteers, they were helped by staff of nature protection reserves, national parks (NP), public enterprises (PE), private companies (PC) and NGOs in various ways: PE "Vojvodinašume", Directorate for Waterways "Plov put", PC "PETERZOMERbv", PE "Rezervati Zrenjanina", Institute for Nature Protection of Serbia (PE), Provincial Institute for Nature Protection (PE), Provincial secretariat for urban planning, construction and environmental protection, SNR "Zasavica", PWE "Vode Vojvodina", PE "Varoš" Vršac, PE "Directorate for Construction Land and Roads of the Municipality of Surdulica", Citizen association "Jadovnik" (NGO), Reserve "Uvac" d.o.o., NIDSBE "Josif Pančić" (NGO), PE "Palić – Ludaš", NGO "Arcus", NGO "Sove na oprezu", NGO "Čuvari prirode", Sokobanja ecological association, Vojvodina Fishing Association.

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Cover image: Large congregations of waterbirds are quite common in Serbia, Jegrička River © Marko Šćiban
Photo p. 2: Greylag Goose © Richard Guijt / Cartography: Marta Lago, Khalil Baddour
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MOBILIZED NATIONAL OBSERVERS

BPSSS members, associates, and volunteers are the foundation of the IWC monitoring network in Serbia. Their number is maintained and is slowly increasing thanks to annual trainings and workshops on birdwatching and bird monitoring in Serbia. Several projects have provided opportunities to organize and support fieldwork for visits to 500 to 850 monitoring sites per year. Securing funds for field activities and maintaining the network throughout the year is a crucial annual task for sustaining the IWC.

NUMBER OF VOLUNTEERS: PARTICIPANTS INVOLVED IN COUNTS' *Their names and surnames are listed in alphabetical order if they visited at least one site during this period.

TOTAL NUMBER OF SPECIES OBSERVED:



SPECIES OBSERVED **IN SERBIA** (2019-2023)



 Regularly visited sites (at least 7 times during

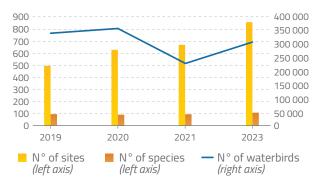
NUMBER OF WETLANDS VISITED:



IWC MONITORING SITES COUNTED (2019-2023)

NOTION IN THE NUMBER OF SITES VISITED.

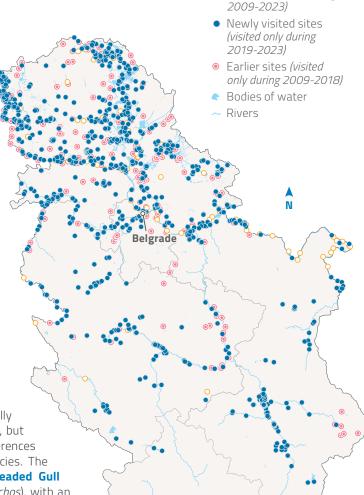
counted species and waterbirds (2019-2023)



The overall number of waterbirds recorded for the 2019-2023 period (no results for 2022) is **1,225,501**, with yearly fluctuations. The number of species and sites recorded annually shows a clear increase (a result of increased overall effort), but is not followed by the number of recorded birds. Trend differences between the years are significant, especially for rare species. The two most abundant waterbird species were the Black-headed Gull (Chroicocephalus ridibundus) and the Mallard (Anas platyrhynchos), with an additional six species with more than 50,000 birds.

WETLANDS COUNTED in Serbia (2009-2023)

More than 1,000 monitoring sites were visited during the 2019–2023 period; however, the 2022 results are missing due to technical reasons. The majority of sites were visited more recently due to the increase in coverage and the number of counters, and thus are not marked on the map. We had a slow increase in the number of sites monitored from 2012 to 2023, with a strong increase since 2019.



© BPSSS/Birdlife Serbia, Tour du Valat sources: BPSSS, OSM, HydroSHEDS, UN-FAO and EuroGeographics

80 km

40

MAIN TRENDS (2019-2023) IN WATERBIRD POPULATIONS



SPECIES		VALUES					
English name	Scientific name	Average nb. of birds	Nb. sites	Magn.*	±ES**		
Northern Pintail	Anas acuta	120	55	-0.22	0.12		
Bean Goose	Anser fabalis	12	6	-1.57	0.75		
Eurasian Bittern	Botaurus stellaris	8	22	-0.37	0.14		

Magn.: Magnitude / ** ±SE: Standard error. The trends shown in the tables are at least significant at an alpha risk of 5%.

N During the 2019-2023 period (no results for 2022) various trends among waterbirds in Serbia were recorded due to extremely variable weather conditions. Although this is a fairly short period for making concrete conclusions, some trends indicate a clear sign of change, with most species fluctuating to varying degrees. In addition to the number of individuals, the diversity of overwintering waterbirds also changed from season to season due to varying amounts of snowfall and ice coverage in the region.





Common Coots *(Fulica atra)* are one of the long-term negative trend wintering species in Serbia which were also among the most numerous © M. Šćiban

Eurasian Bittern (*Botaurus stellaris*) are mainly solitary, overwintering waterbirds in Serbia © M. Šćiban

\ HIGHLIGHTS

The recommendation for all national coordinators is to constantly work on maintaining their network of countervolunteers and train new counters via various approaches and trainings which are crucial for securing the effort for IWC monitoring. It is important to teach (new) counters counting methodologies, approaches during counting, marking weather and habitats characteristics and highlight marking all of that data into IWC forms for further analyses. Roost counts and various other approaches for waterbird identification are important for high quality data collection from season to season.

N FOCUS

Negative trends were experienced for only 3 species, which were generally rare and present in small numbers even during earlier detailed seasons. The **Bean Goose** (*Anser fabalis*), which in the 20th century was one of the commonest goose species wintering in Serbia, has become a real rarity at the beginning of the 21st century. It seems that this negative trend for the Bean Goose is continuing today due to a general shift in the wintering of the species in Europe. The **Eurasian Bittern** (*Botaurus stellaris*) and **Northern Pintail** (*Anas acuta*) have also experienced declines. These are rare wintering species on an annual basis, and their overall numbers are negligible at the flyway level. Due to their generally low abundance during the winter months, they can easily be overlooked.

SPECIES		VALUES					
English name	Scientific name	Average nb. of birds	Nb. sites	Magn.*	±ES**		
Common Moorhen	Gallinula chloropus	570	222	0.11	0.05		
Dunlin	Calidris alpina	43	9	1.39	0.50		
Eurasian Curlew	Numenius arquata	404	31	0.94	0.18		
Eurasian Golden Plover	Pluvialis apricaria	61	6	1.21	0.58		
Western Water Rail	Rallus aquaticus	102	115	0.29	0.06		
Northern Lapwing	Vanellus vanellus	739	38	0.48	0.11		

Magn.: Magnitude / ** ±SE: Standard error. The trends shown in the tables are at least significant at an alpha risk of 5%.

N During the 2019-2023 period winters continued to change. We had a relative prevalence of warmer months of January, very low snowfall and icy conditions, which have led to the creation of large areas of unfrozen, shallow waters in fishponds and lakes. These weather changes have directly increased the potential and possibility of increased numbers of some usually absent species when winters are harsh.

In this group of waterbirds which increased are mainly waders, namely the Northern Lapwing (*Vanellus vanellus*), Golden Plover (*Pluvialis apricaria*), Curlew (*Numenius arquata*) and Dunlin (*Calidris alpina*). The increase of overwintering Water Rails (*Rallus aquaticus*) and Common Moorhens (*Gallinula chloropus*) is probably a result of milder winters, but also of increased site coverage and the use of tape recordings by counters. For all waders mentioned, some sites were especially important with most birds gathering only on a few sites. The increase in wader numbers was followed by the first confirmed overwintering of other species usually absent in winter such as the Black-winged Stilt (*Himantopus himantopus*), Wood Sandpiper (*Tringa glareola*) and Little Stint (*Calidris minuta*) which had never been confirmed previously in Serbia during wintering months.

\ CURLEW

The **Eurasian Curlew** (*Numenius arquata*) is the most important wader that winters in Serbia with over several hundred birds annually. Nearly all birds are annually recorded in northern Serbia in the **Banat** and **Bačka** regions. In the past during harsh winters Curlews were very rare and only occasionally overwintered. Low amounts of snowfall and the absence of icy days have provided usually frozen dry fishpond lakes as ideal mudflats for them together with the still numerous wet meadows and arable fields surrounding them. Birds mainly use shallow lakes and fishponds as both roosting and feeding sites, while they can also feed in wet meadows and arable fields which provide rich sources of various invertebrates. It is important to highlight that besides nominate European subspecies (*Numenius arquata arquata*) counters on several occasions also recorded

small, short-billed birds with completely white underwings and hints of supercilium which correspond to the **Steppe Curlew** (*Numenius arquata suschkini*) whose migration was confirmed to cross the **Pannonian plain** (Morozov, 2024). If it is confirmed that these birds are indeed this poorly known and endangered subspecies, it would additionally increase the value of overwintering areas for Curlews in Serbia.

\ HIGHLIGHTS

To search for new and rare overwintering waterbirds it is important to constantly improve detection methodologies during surveys while increasing observer numbers and the quality of equipment (telescopes, cameras) which directly increases the possibility of detecting them.



4 WETLANDS MAY BE DESIGNATED AS AREAS OF INTERNATIONAL IMPORTANCE

WETLANDS OF INTERNATIONAL IMPORTANCE FOR WATERBIRDS

Identification based on mid-January (2019–2023) count data for Ramsar Criteria 5 and 6. Empty cells in the "Ramsar site" column identify sites not included in the Ramsar network.

INTERNATIONAL IMPORTANCE SITE	Designated Ramsar site	> 20 000 waterbirds	Greater White-fronted Goose	Greylag Goose	Common Crane	Smew	Pygmy Cormorant
Danube 30 (1141 - 1150 rkm)		0					
Danube 37 (1071 - 1080 rkm)						0	
Danube 54 (901 - 910 rkm)				0			
Ludaš lake	R	0	0	0	0		
Sava 1 (0-10 rkm)							0
Slano Kopovo wetland	R				0		

- **Criterion 5:** A wetland should be considered internationally important if it regularly* supports 20,000 or more waterbirds.
- **Criterion 6:** A wetland should be considered internationally important if it regularly* supports 1% of the individuals in a population of one species or subspecies of waterbirds.
- * To define the notion of "regularly," we have applied the following rule (currently under review by COP15 RAMSAR, 2025): A wetland is considered to regularly support a population of waterbirds of a given size if either of the following conditions is met:
- 1. The average of the annual maxima recorded over a period of at least five years reaches or exceeds the required threshold; or
- The required number of birds is recorded in at least two-thirds of the years for which adequate data are available, provided that data are available for at least three years in total.
- Results of IWCs for 2019-2023 identified 4 new potential Ramsar sites according to different criteria (Table). All of them are 10km long segments of the Danube and Sava rivers, while in addition lakes Ludaš and Slano Kopovo have also confirmed their status.



N HIGHLIGHTS

To propose new Ramsar sites we should calculate multiple monitoring sites which all together create a concrete ecological unit. National IWC monitoring sites are not adequate for this kind of analysis but hint at the international importance of some areas. Even so, in Serbia we have several monitoring sites which satisfy different Ramsar criteria during IWC counts.

Since some habitats/sites have a different importance for waterbirds during different parts of the season, therefore some areas could be additionally recognized as Ramsar sites via additional surveys and not only based on January IWC counts.

Greylag Goose (*Anser anser*) landing on water © D. Maw

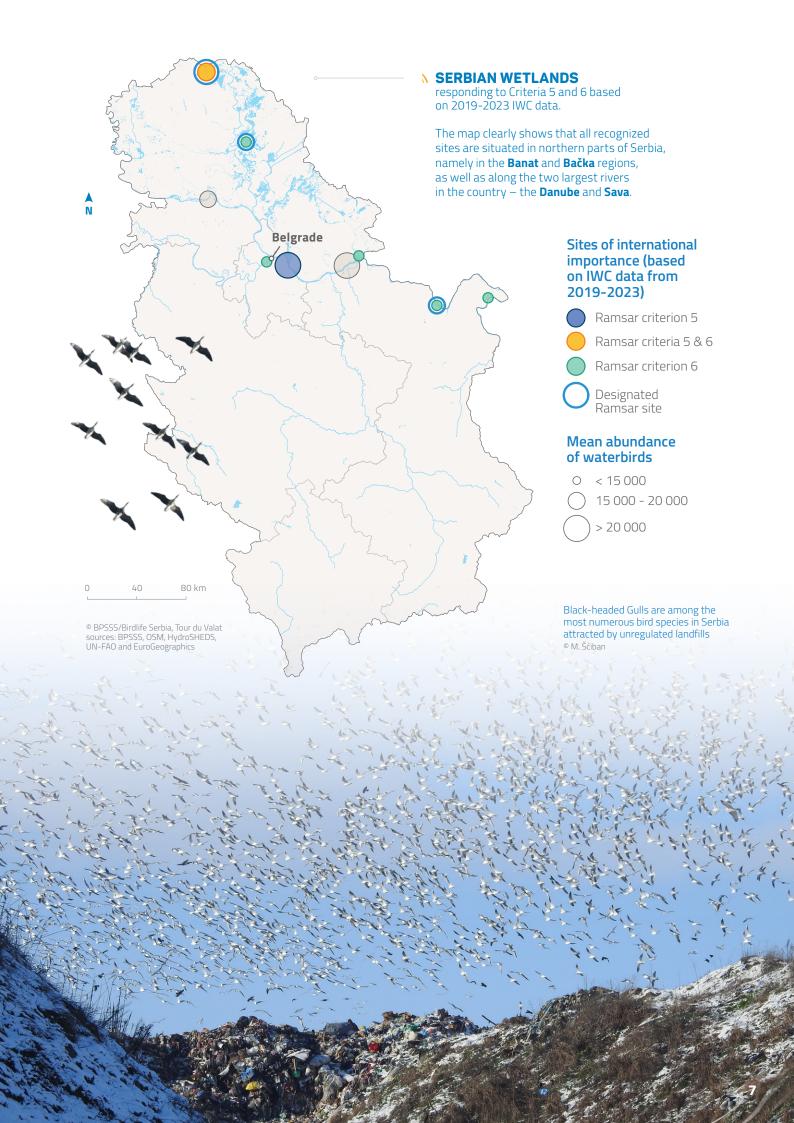
N SUGGESTED ACTIONS

Surveys during other parts of the year are strongly recommended, especially focusing on night roosts for sociable species which might reveal significant bird numbers.

All Ramsar sites in Serbia as well as IBAs are annually covered during the IWC. Some of them are small and easy to count (Slano Kopovo, Vlasina and Ludaš lakes), while some are huge and challenging for complete coverage (Gornje Podunavlje, Djerdap gorge and Koviljsko-petrovaradinski rit). All of them except for the usually frozen Pešter polje

and **Vlasina** have confirmed their status as Ramsar sites with numbers fluctuating from season to season. Because of differences in the borders and territories of the Ramsar sites and IWC monitoring sites, it is not easy to precisely define results of their monitoring, so they will not be covered in this report until the methodology for doing so is defined.

Unfortunately, Ramsar sites in Serbia do not have polygon shapefiles available on the official website (only three have one), so we were unable to precisely analyse trends for them.



FOCUS ON A COUNTRY'S FLAGSHIP SPECIES:

THE SMEW (MERGELLUS ALBELLUS)

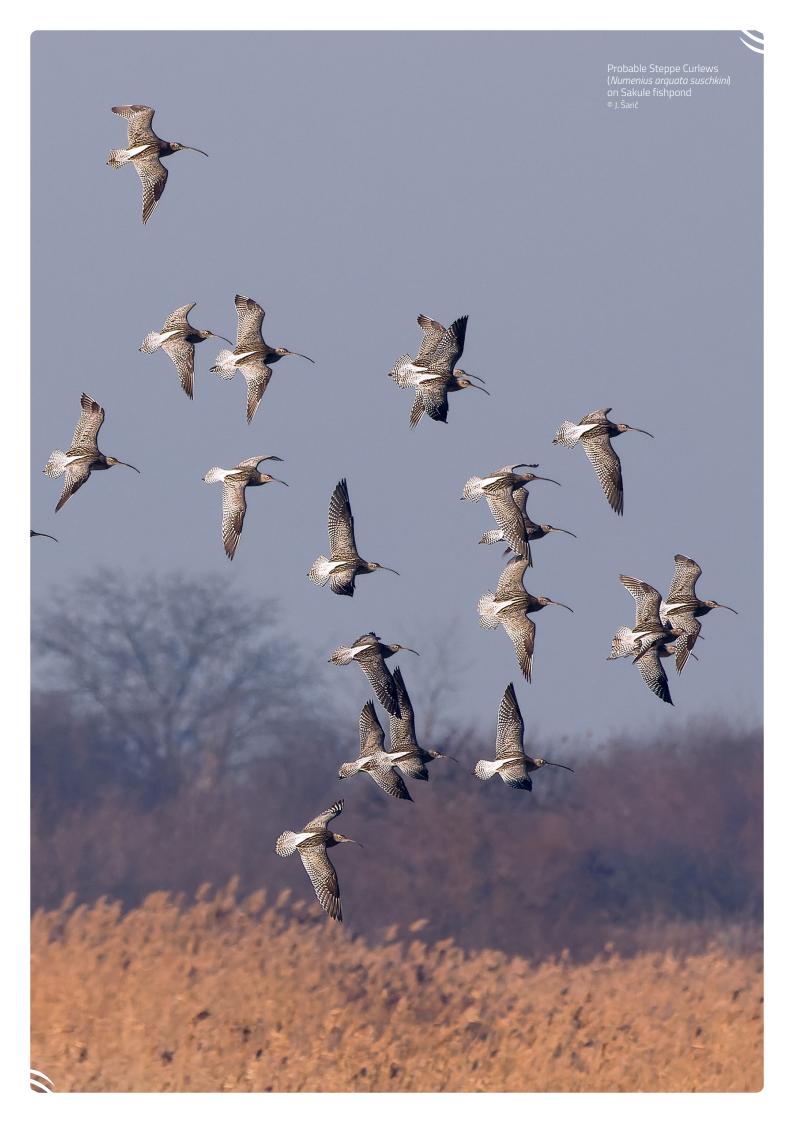
Serbia has diverse waterbird fauna that overwinters annually in various types of water ecosystems with natural or artificial sources. Among them none could be easily identified as the country's flagship species. In terms of international importance, the Smew is the most important waterbird in terms of rarity on the continental level and the numbers which are annually present in Serbia.



The Smew regularly winters with numbers from season to season fluctuating from **1 500** to **3 000** with up to 95% of those numbers situated in lower parts of the Danube River basin in Serbia. It sometimes gathers in flocks of several dozen birds mainly during evening roosts. During the day they are mainly scattered in smaller hunting groups. The main threat for this species is drowning in fishing nets (as for other diving ducks), but also poaching because of mistaken identification by hunters. Mortality because of avian influenza has not yet been recorded.

The most important Ramsar site for this species is **Labudovo okno**, while 5 IBAs have Smew as one of the species qualifying them for recognition (**Labudovo okno**, **Srebrno jezero – Golubac, Djerdap gorge, Mala Vrbica, Ključko Podunavlje**). The overall long-term trend for this species in Serbia is a slight decrease with large yearly fluctuations.





WINTERING OF BEWICK'S SWAN IN SERBIA

Climate change is not the only driver of changes in bird numbers or even the presence or absence of some species in some regions. The most famous ones in Serbia which result from natural shifts in wintering populations are Bewick's Swan (*Cygnus columbianus*) in a positive way and the Bean Goose (*Anser fabalis*) in a negative way. On the continental level, Bewick's Swan is undergoing large changes in its annual wintering wetlands (Rees *et al.* 2024).





Bewick's swans and a spoonbill overwintering in Serbian wetlands © J. Šarić

Wintering of **Bewick's Swan** in Serbia is a major change in the status of this species. Before 2000 it was very rare in Serbia with only 2 historical recordings (Šćiban *et al.* 2015). The first solitary observations of the species in the 21st century were in 2004 and 2007. The first flocks appeared in 2014, while subsequently the species has become regular with numbers fluctuating from year to year. Until 2023 the highest recorded number during the IWC was 71, which is an unimaginable number compared to the status of the species in the 19th and 20th centuries.

Besides being a regular wintering species now, some monitoring sites (alkaline lakes in the **Banat region** and islands and estuaries along the **Danube River**) have become annually important for wintering Bewick's Swans. We have not yet recorded any cases of mortality or threats by poachers (except for disturbance) or cases of avian influenza in Serbia.

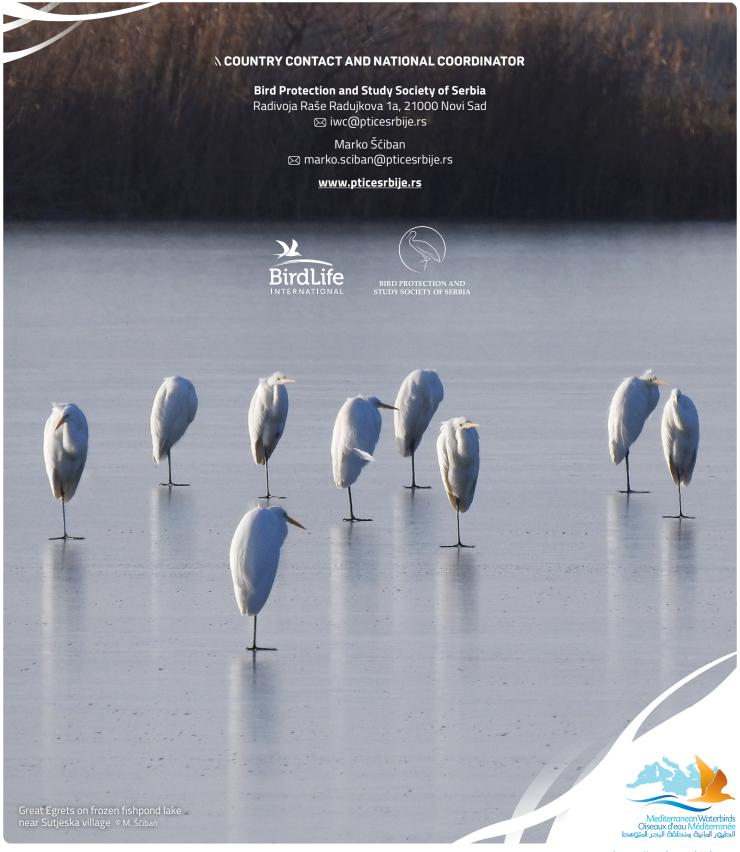
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oncentration of coots on a wetland in foggy weather © M Šćiban





https://medwaterbirds.net

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